

## CAPITAL BUDGET AND THREE-YEAR CAPITAL PLAN

Stanford's Capital Budget and three-year Capital Plan are based on a projection of the major capital projects that the university will pursue in support of the academic mission. The Capital Budget represents the anticipated capital expenditures in the first year of the rolling three-year Capital Plan. The Capital Plan includes projects that are in progress or are expected to commence during that three-year period. Both the Capital Budget and the Capital Plan are subject to change based on funding availability, budget affordability, and university priorities.

At \$2.5 billion, the Capital Plan reflects the significant investment Stanford continues to make in its facilities, driven by the academic priorities for teaching, research, and related activities described in Chapter 2, and the initiatives of the administrative and auxiliary units that support the academic mission, described in Chapter 3.

With the 2012/13 project completions, Stanford will have invested \$4 billion in its facilities, infrastructure and commercial real estate since 2000. The campus has been transformed with state-of-the-art facilities supporting science, engineering, medicine, business, athletics, law and the arts. Additionally, the Rosewood Sand Hill hotel and office complex, and other off-campus commercial development projects have provided additional income to the university.

In addition to the many projects currently under way and previously forecasted, this year's plan includes the following new projects: the Stanford Institute for Chemical Biology/Neurosciences building (\$196.9 million), Mayfield California Avenue Faculty Staff Housing (\$128 million), a 1000-stall underground parking structure at Roble field (\$40.9 million), 408 Panama Mall office building (\$35.4 million), 1651 Page Mill Road Tenant Improvements (\$23.8 million), renovation of the Stanford House in Oxford (\$4 million) and a new Dean's residence and program space for the future Crother's College (\$3 million). Additionally, the following projects have been reactivated: Encina Renovation (\$67.2 million), Public Safety building (\$17 million), and the final phase of the Durand Building renovation (\$6.8 million).

The following five significant projects comprise roughly half of Stanford's Capital Plan: the Stanford Energy System Innovations (SESI) project (\$438 million), Bio Medical Innovation building 1 (BMI 1; formerly Foundations in Medicine 1 (FIM 1)) (\$266.4 million), Bioengineering/Chemical Engineering building (BioE/ChemE) (\$215.5 million), Chemical Biology/Neurosciences building (\$196.9 million), and the Biology Research and Teaching project (\$179.3 million). The remaining half of the plan includes 30 additional projects and 8 infrastructure programs. For a detailed listing of all Capital Plan projects and programs, see the tables on pages 79–81.

This chapter will include a discussion of the 2013/14 Capital Budget, provide an overview of the capital planning process, describe current strategic initiatives, and present the 2013/14 - 2015/16 Capital Plan and related constraints.

### THE CAPITAL BUDGET, 2013/14

The 2013/14 Capital Budget at \$658.7 million reflects the university's significant capital projects including SESI, BioE/ChemE, Mayfield California Avenue Faculty Staff Housing, Comstock Graduate Housing, McMurtry Building, Building 08-350 Renovation for SUL North, Anderson Collection at Stanford University, C.J. Huang Building, RAF 1 and RAF 2 Rehabilitation and Retrofit, Crown Quadrangle Renovation, Northwest Data Center and Communications Hub (NDCCH), and various infrastructure projects and programs. The projected 2013/14 expenditures reflect only

## MAJOR CAPITAL PROJECTS - PERCENT OF COMPLETION 2013/14<sup>1</sup>

[IN MILLIONS OF DOLLARS]

	CAPITAL BUDGET 2013/14	ESTIMATED PROJECT COST	ESTIMATED PERCENT COMPLETE 2013/14
Stanford Energy System Innovations (SESI)			
Replacement Central Energy Facility	116.6	230.0	53%
Piping, Building Conversions and Process Steam Plant	69.9	165.7	60%
New Electrical Substation	21.4	42.3	53%
Bioengineering / Chemical Engineering (Building and Connective Elements)	28.0	196.6	100%
Mayfield California Avenue Faculty Staff Housing (180 units)	12.8	128.0	13%
Comstock Graduate Housing (362 net new beds)	63.6	110.0	100%
McMurtry Building	31.2	87.0	67%
Building 08-350 Renovation for SUL North	33.0	57.0	100%
Anderson Collection at Stanford University	16.7	36.0	100%
C.J. Huang Building	13.4	23.2	100%
RAF 1 and RAF 2 Rehabilitation & Retrofit	16.6	20.6	75%
Crown Quadrangle Renovation	10.6	15.0	100%
Northwest Data Center and Communications Hub	11.3	14.9	90%
	<b>445.1</b>	<b>1,126.3</b>	

<sup>1</sup> Includes projects scheduled to be in construction and with forecasted expenditures greater than \$10 million in 2013/14.

a portion of the total costs of the capital projects, as most projects span more than one year. The table highlights major capital projects with significant expenditures that will be incurred in the 2013/14 Capital Budget, as well as the percentage of each project expected to be complete by the end of 2013/14.

The size of the Capital Budget is based on the assumption that funding availability will align with approved project schedules. Historically, the Capital Budget has been substantially higher than actual spending due to project deferrals caused by funding gaps. In fact, the last decade's actual expenditures were 70% of the total budgeted. Over the past five years, the percentage improved to 74% because the number of projects in recent Capital Budgets that have all funding identified, staff assigned, and Board of Trustees approval increased.

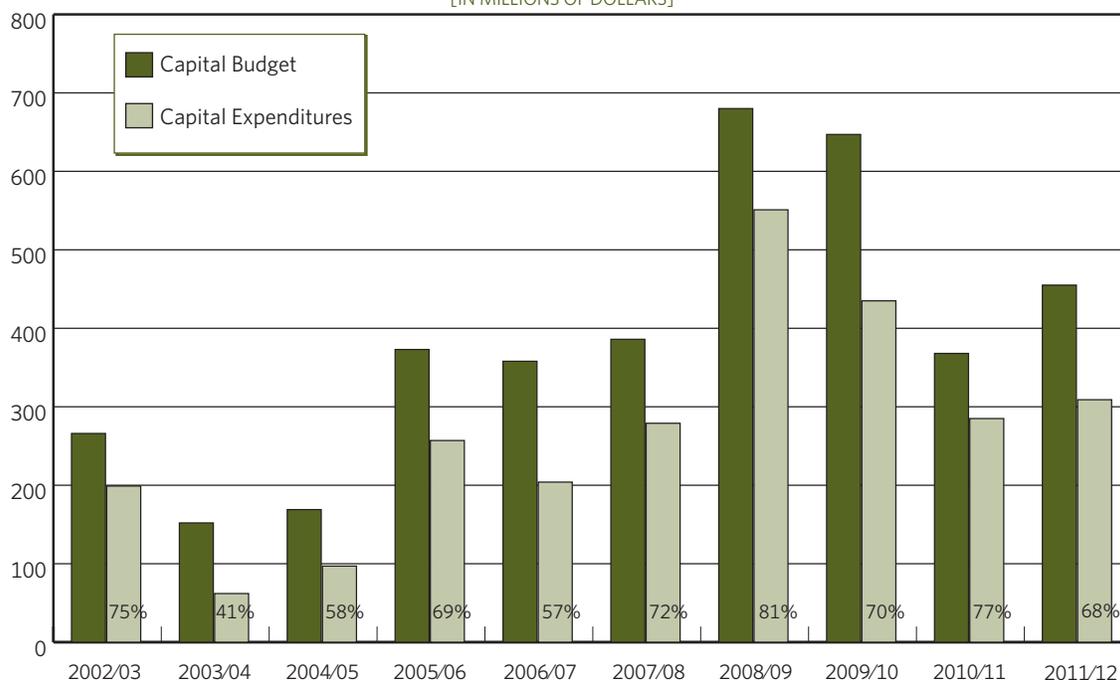
### Sources and Uses

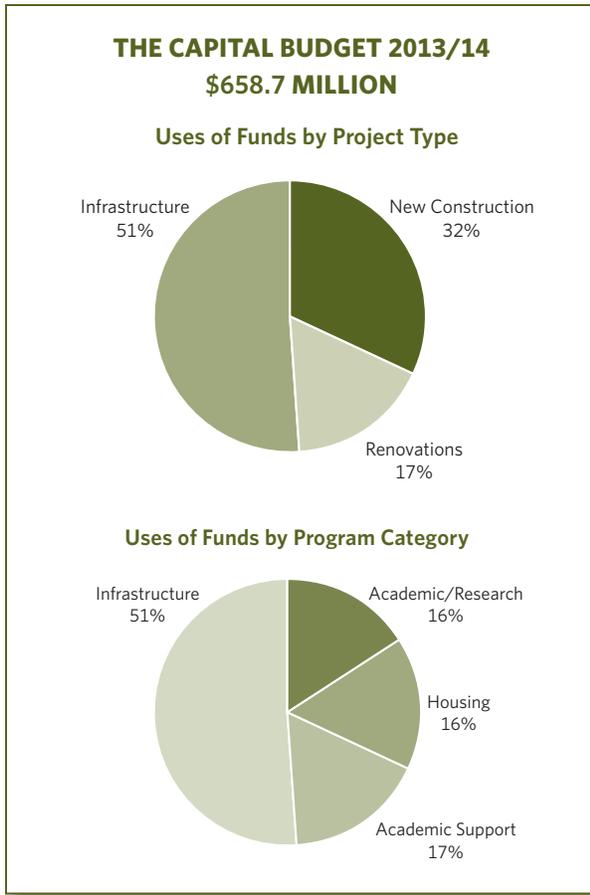
Sources of funds for the Capital Budget will be a combination of current funds (which include the Capital Facilities Fund (CFF), funds from university and school reserves, General Use Permit (GUP) and Stanford Infrastructure Program (SIP) fees), gifts, and debt. The university typically allocates CFF or debt funding to projects in the absence

### CAPITAL BUDGET VS. EXPENDITURES

2002/03 to 2011/12

[IN MILLIONS OF DOLLARS]





of other available funding. The mix of project funding will be impacted by the timing of gift receipts, which may be bridge financed.

The uses of funds by project type and program category for the \$658.7 million Capital Budget are shown in the pie charts above. Infrastructure investment of \$336 million in 2013/14 (51%) includes the SESI and NDCCH projects, Investment in Plant (Planned Maintenance), and Residential & Dining Enterprises (R&DE) Capital Plan Projects (CPP; formerly R&DE's Capital Improvement Program (CIP)). Academic support projects forecasted at \$109.4 million (17%) include Building 08-350 Renovation for SUL North, Anderson Collection at Stanford University, C.J. Huang Building, and RAF 1 and RAF 2 Rehabilitation and Retrofit. Academic/Research projects forecasted at \$107 million (16%) include BioE/ChemE, McMurtry Building, and Crown Quadrangle Renovation. Investment of \$106.3 million for housing projects (16%) is primarily for Mayfield California Avenue Faculty Staff Housing and Comstock Graduate Housing.

## Capital Facilities Fund

In June 2007, the Board of Trustees approved an increase in the target endowment payout rate from 5.0% to 5.5%. The additional 0.5% payout releases unrestricted funds, which are held in the CFF to support major facilities projects.

Annual transfers to the CFF are projected to be \$54.0 million in 2012/13 and \$99.5 million in 2013/14 with commitments of \$122.9 million in 2012/13 and \$66.7 million in 2013/14, as shown in the table on the next page, along with a detailed listing of projects that have received or will receive these funds.

In general, non-formula CFF funds are allocated to projects that are difficult to support through restricted sources, and thus reduce the call for debt serviced by general funds. The formula units determine uses of their CFF funds according to their highest priorities.

## Capital Budget Impact on 2013/14 Operations

The 2013/14 Consolidated Budget for Operations includes incremental debt service and operations and maintenance (O&M) expenses for projects completing in 2013/14. Additionally, this budget includes an incremental increase in internal debt service and O&M expenses for projects completing in 2012/13 that are operational for less than 12 months.

Capital projects requiring debt are funded from internal loans that are amortized over the asset life in equal installments (principal and interest). The budgeted interest rate (BIR) used to calculate the internal debt service is a blended rate of interest expense on debt issued for capital projects, bond issuance and administrative costs. The BIR for 2013/14 is 4.25%.

The projected incremental internal debt service funded by unrestricted funds, including formula units, in 2013/14 is \$6.7 million. This amount includes additional debt service on BioE/ChemE, the Stanford Research Computing Facility, the School of Medicine's (SoM) tenant improvements at Porter Drive locations, and other smaller capital projects and programs. It is offset by decreases in bridge financing as scheduled payments or gift pledges are made for several university buildings. This additional debt service brings the total annual internal debt service in 2013/14 to \$171.4 million, \$57.9 million of which is borne by unrestricted funds.

## CAPITAL FACILITIES FUND (CFF)

### Funding Sources and Committed Uses of Funding

[IN MILLIONS OF DOLLARS]

	2012/13	2013/14
<b>Sources of Funding</b>		
<b>Formula Units</b>		
School of Medicine	13.3	13.6
Hoover Institution	3.8	3.9
President's Funds	9.4	9.7
Non-Formula	27.5	72.2
<b>Total Funding</b>	<b>54.0</b>	<b>99.5</b>
<b>Committed Uses of Funding</b>		
Building Maintenance - School of Medicine	4.5	6.0
RAF 1 and RAF 2 Rehabilitation and Retrofit	2.9	2.6
Stone Complex Seismic Bracing Projects	1.3	
C.J. Huang Building	0.8	
Porter Drive Site Planning - School of Medicine	0.8	1.6
Various School of Medicine Projects	4.0	1.2
Hoover Institution Projects	3.8	3.9
Various Projects Funded by President's Funds	9.4	9.7
Building 08-350 Renovation for SUL North	48.5	
Arrillaga Outdoor Education and Recreation Center	13.0	
Crown Quadrangle Renovation	5.0	
Institute for Chemical-Biology (Fit-up for Professor Kholsa)	3.0	
Searsville Alternatives Study	3.0	
Anderson Collection at Stanford University	2.9	
BioE/ChemE (bridge financing for gifts to be raised)	2.8	
Emergency Generators and Management Programs	2.7	0.7
Northwest Data Center and Communications Hub	2.5	
McMurtry Building	2.0	
Forsythe Data Center Phase 4 Power and Cooling Upgrade	1.4	
Biology Research Building	0.5	3.1
Teaching Labs & Learning Center (Old Chem)	1.3	10.1
Ground Source Heat Exchange Study	1.3	1.8
408 Panama Mall Office Building	1.0	10.0
Stanford House in Oxford	1.0	3.0
Registrar Classroom Renovations	0.9	
Roble Gym Renovation	0.8	4.2
Stanford Nanofabrication Facility/CIS	0.6	0.9
Knight and Littlefield Repurposing	0.4	
Meyer Library Demolition		6.7
Campus Center Canopy		1.0
Other Projects	1.0	0.2
<b>Total Commitments</b>	<b>122.9</b>	<b>66.7</b>
Net Annual Activity	(68.9)	32.8
Balance at Beginning of Year	81.6	12.7
Uncommitted Balance	12.7	45.5

Consolidated internal debt service, including that borne by formula units, auxiliaries, service centers, Faculty Staff Housing, and real estate investment is projected to increase from \$164.7 million to \$171.4 million. In addition, annual lease payments for rental properties, largely occupied by the SoM, are projected to be \$26.8 million in 2013/14.

The university will incur incremental O&M costs in 2013/14 of \$5.4 million, which includes \$3.2 million for the BioE/ChemE Building, \$1.3 million for 3160 Porter Drive, and \$935,000 for the Stanford Research Computing Facility.

## CAPITAL PLANNING OVERVIEW

### Capital Planning at Stanford

Stanford's Capital Plan is a three-year rolling plan with budget commitments made for the first year and only for projects with fully identified and approved funding. Cash flow expenditure forecasts for these projects extend beyond the three-year period, and budget impacts for operations, maintenance, and debt service commence at construction completion. The plan includes forecasts of both cash flow and budget impacts by year and demonstrates the impact of projects beyond the three-year plan (see table on page 76).

The Capital Plan is set in the context of a longer-term capital forecast for the university. The details of this longer-term forecast, particularly funding sources and schedules, are less clear than those of the three-year plan, as the needs and funding sources that may emerge over the long-term horizon are difficult to anticipate. Over the longer-term forecast, plans tend to evolve as various projects prove more feasible than others based upon shifting funding realities and academic priorities.

### Strategic Initiatives

The following university strategic initiatives, detailed below, are integral to this year's Capital Plan:

- Stanford Energy System Innovations (SESI)
- Science, Engineering, and Medical Campus (SEMC)
- Arts Initiative
- New Housing
- Off-Site School and Administrative Facilities

## Stanford Energy System Innovations

Included in the Capital Plan is the SESI project, which at \$438 million represents 17% of the plan. SESI will replace the existing central energy plant and related infrastructure.

Stanford currently receives most of its thermal (heating and cooling) and electrical energy from the Cardinal Cogeneration plant (Cogen). Cogen operations are based on an operation and maintenance agreement with General Electric that expires in April 2015. At that time, the plant will be 28 years old and at the end of its useful life. Other central energy plant equipment is or will be at or near the end of its useful life. Since 2007, nearly \$130 million of maintenance and system upgrade projects have been deferred pending consideration and selection of a Cogen replacement.

Campus growth projections and the expansion of the Stanford Hospital and Clinics and Lucile Packard Children's Hospital will require a 20% increase in both thermal and electrical energy capacity by 2020. Approximately half of this increased demand in thermal energy is due to campus development and half is attributed to the hospitals' growth, while all of the electrical growth is due to the campus since the hospitals are on the City of Palo Alto electrical grid.

After a rigorous review of many options by external engineering firms, financial consultants, faculty, senior university management, and the Board of Trustees, SESI was approved in December 2011 and is scheduled to be complete by April 2015. SESI includes the following components:

- Procurement of electricity through Direct Access (effective March 2011);
- Replacement of Central Energy Facility (RCEF) and campus electrical substation on the west side of campus. The RCEF recovers waste heat from the campus chilled water system (which is currently discharged out of cooling towers) to meet the bulk of campus heating needs;
- Conversion of the existing central steam system to a more efficient hot water system; and
- Decommissioning and demolition of the existing plant and electrical substation.

SESI is one of the most efficient and innovative central district thermal energy system designs in the world and will further advance Stanford's leadership in engineering and environmental excellence while also "greening the bottom line" in the truest sense. Once SESI is complete, the campus

will utilize 70% of the waste heat currently expelled from cooling towers to meet 80% of campus heat demands; reduce campus water consumption by more than 18%; and reduce greenhouse gas emissions to less than half of current levels and well below 1990 levels.

## Science, Engineering, and Medical Campus

Over the course of the SEMC initiative, the university has invested in the replacement of aging facilities for the science, engineering, and medical programs with the construction of the following projects:

### Active

- Bioengineering/Chemical Engineering Building (to be completed in 2014)
- Biology Research and Teaching Project (both buildings to be completed in 2016)

### Completed

- Astrophysics Building (2006)
- Jerry Yang and Akiko Yamazaki Environment and Energy Building (2007)
- Lorry I. Lokey Stem Cell Research Building (2010)
- Jen-Hsun Huang Engineering Center (2010)
- James and Anna Marie Spilker Engineering and Applied Sciences Building (formerly Nano) (2010)
- Li Ka Shing Center for Learning and Knowledge (2010)

This year's Capital Plan includes both the BioE/ChemE building and the Biology Research and Teaching project, the remaining SEMC projects.

### Bioengineering/Chemical Engineering Building

At \$215.5 million, the BioE/ChemE project is the final component of the Science and Engineering Quad 2 (SEQ 2). This building and its associated connective elements and fit-ups will facilitate interdisciplinary study through the placement of two related programs — Bioengineering and Chemical Engineering — in one location. The building will include wet laboratories and associated support spaces designed for teaching and intensive research in each of the departments. Included also in the building scope are classrooms, faculty offices, and conference spaces.

The 227,000 gross square feet (gsf) BioE/ChemE building will be consistent with the architectural character of the SEQ 2 Quad. Construction is in progress.

### **Biology Research and Teaching Project**

The Biology Research and Teaching project consists of two separate facilities that represent the eighth and last component of the SEMC. These facilities include the following:

#### **Biology Research Building**

The Biology Research building is intended to replace the existing Herrin Hall and Herrin Laboratory buildings, which will ultimately be removed. The proposed \$96.1 million building will provide laboratory space for approximately half of the department's faculty, plus the corresponding research staff of graduate students, post-docs, and technicians. The 108,500 gsf building will be located north of the Gates Computer Science building and front onto Campus Drive; four stories above grade and one below are planned. Included in the building scope are laboratory support spaces, faculty offices, and conference areas. The new building will encourage collaboration and interdisciplinary work, allowing faculty with research in molecular biology, cell biology, neurobiology, biophysics, and molecular evolution to conduct their research across departmental and school boundaries. Construction is anticipated to begin in 2015.

#### **Teaching Labs & Learning Center**

In conjunction with the Biology Research Building, the Capital Plan includes the renovation of the Old Chemistry (Old Chem) building into an undergraduate student learning center. The \$66.7 million renovated facility will house Biology and Chemistry teaching laboratories, a combined sciences library for Biology, Chemistry, and Math, as well as classrooms, auditoria, and student collaboration areas. Architectural programming has begun and design work is anticipated to begin later this year. Due to the historic status of Old Chem, the renovation will fully retain the building's exterior character and select interior features. Construction is anticipated to begin in 2014.

#### **Arts Initiative**

The Arts Initiative, a key component of the Stanford Challenge, established a university commitment to the following:

- Engage the arts and creativity;
- Improve arts in undergraduate life;
- Strengthen the academic programs in the arts; and
- Develop world class facilities to support the arts.

The development of a long range vision to create an Arts

District established a physical plan to support this initiative. This district, which flanks Palm Drive and the Oval at the main entrance into campus, leverages the following Stanford venues — the Cantor Arts Center, Frost Amphitheater, Memorial Auditorium, the Art Gallery and the recently completed Bing Concert Hall. The Bing Concert Hall is an 844-seat acoustically exceptional vineyard-style hall that held its first performance in January 2013. Two additional key building components of the Arts District — Anderson Collection at Stanford University and McMurtry Building — are under construction and when complete, will provide additional exhibit and academic space.

#### **Anderson Collection at Stanford University**

This \$36 million, 33,000 gsf building will house the Anderson Collection at Stanford — 121 works by 86 artists that include some of the foremost examples of post-World War II American art. The collection marks a major milestone in the Stanford Arts Initiative, a university-wide campaign to integrate the arts fully into the life of the Stanford campus. The site is located north of the Cantor Arts Center on the corner of Lomita and Campus Drive. Construction has commenced and is scheduled to complete in 2014.

#### **McMurtry Building**

The \$87 million McMurtry Building will serve as an interdisciplinary hub for the arts at Stanford. The 100,000 gsf building will be the future home of the Art and Art History Department's programs in Art Practice, Art History, Film and Media Studies, and Documentary Film. The building is located on Roth Way between the Cantor Arts Center and Parking Structure 1 on the site of the now demolished Old Anatomy building. Construction has commenced and is scheduled to complete in 2015.

Connections in the landscape between the Bing Concert Hall, the Anderson Collection at Stanford University, the McMurtry Building, and the Cantor Arts Center are planned to highlight Stanford's existing collection of outdoor art, as well as to provide future opportunities for newly commissioned art.

#### **New Housing**

Stanford University prides itself in having a housing program that provides a wide range of choices for its students, faculty, and staff. The vision for academic housing builds upon this program by providing the physical framework that offers a variety of living options.

Construction of the Comstock Graduate Housing project (\$110 million) has recently commenced and will include the demolition of nine existing low-rise residences. Once complete, 362 net new graduate beds will be added to the housing inventory. Additionally, two undergraduate housing projects are planned at Lagunita (\$35 million) and Manzanita (\$20 million) for an additional 328 new beds.

The Graduate School of Business (GSB) also plans to expand their current housing stock by building 150 new graduate beds (\$66.7 million), with construction commencing in 2015.

In addition to student housing, the university plans to build 180 residential units for faculty and staff on California Avenue in Palo Alto (\$128 million). Along with providing much needed housing, this project will also meet compliance requirements under the Mayfield Development Agreement.

### Off-Site School and Administrative Facilities

Several departments within Stanford's School of Medicine along with various university administrative units have moved or will move to the Porter Drive area of the Stanford Research Park. Once all the tenant improvements are complete, these Stanford entities will partially or fully occupy seven buildings with a population of approximately 2,000 faculty and staff. The moves are the result of academic space needs that currently cannot be accommodated on campus and the strategic initiative that allows core campus lands to be used for the highest academic priorities by locating administrative functions to nearby locations. Currently this location is the Stanford Research Park.

In 2005 and 2008, Stanford purchased a total of 35 acres in Redwood City to develop an administrative university campus. Stanford is currently working with Redwood City to draft a detailed 30-year development agreement, to which significant points have been agreed. Redwood City's approval to allow for 1.5 million square feet of new development for administrative office space is expected to be received in 2013.

## THE CAPITAL PLAN, 2013/14-2015/16

Stanford's academic campus, including the School of Medicine but excluding the hospitals, has approximately 700 facilities providing over 16 million square feet of physical space. The physical plant has an historical cost of \$6.9 billion and an estimated replacement cost in excess of \$10 billion.

The Capital Plan includes a forecast of Stanford's annual programs designed to restore, maintain, and improve campus facilities for teaching, research, housing, and related activities and outlines Stanford's needs for new facilities. The Capital Plan is compiled, reviewed, and approved in a coordinated manner across the university. The plan carefully balances institutional needs for new and renovated facilities with the challenging constraints of limited development entitlements, available funding, and budget affordability.

Projects listed in the Capital Plan are those approved by the provost. Many of the projects are under the purview of the Board of Trustees. Board-level approvals are required for any of the following:

- Total project cost of \$10 million and above
- New building construction
- Projects that use 5,000 or more new square feet within the Academic Growth Boundary
- Changes in land use
- Projects with major exterior design changes

Expenditures in the 2013/14-2015/16 Capital Plan, which include major construction projects in various stages of development and numerous infrastructure projects and programs, total \$2.5 billion. The table below provides a comparison of the last three Capital Plans.

### COMPARATIVE CAPITAL PLANS

[IN MILLIONS OF DOLLARS]

	2011/12	2012/13	2013/14
Design/Construction	495.3	1,030.6	1,200.9
Forecasted	1,106.1	840.3	1,096.4
Infrastructure	275.8	262.3	249.4
<b>Total</b>	<b>1,877.2</b>	<b>2,133.2</b>	<b>2,546.7</b>

### Projects in Design and Construction

Projects in Design and Construction total \$1.2 billion (47% of the plan). Construction of these projects is contingent upon fundraising of \$101.1 million (8%). Sixteen projects are listed in this category, as shown in the related table on page 79.

The cost of projects in Design and Construction increased by \$170.3 million from 2012/13 as a result of projects moving from the Forecasted category and the addition of new projects, partially offset by the completion of certain projects. Projects moving from Forecasted to Design and Construction include Comstock Graduate Housing (\$110 million), C.J. Huang Building (\$23.2 million), RAF 1 and RAF 2 Rehabilitation and Retrofit (\$20.6 million), Buildings 02-520 and 02-524 Renovation (\$20.5 million), Crown Quadrangle Renovation (\$15 million), and Northwest Data Center and Communications Hub (\$14.9 million). The Mayfield California Avenue Faculty Staff Housing project (\$128 million) and Crothers Hall/Crothers College Dean's Residence (\$3 million) are two new projects to the Capital Plan. Projects scheduled to be completed in 2012/13 include the 3155 and 3165 Porter Drive Lab Renovations (\$42.4 million), Stanford Research Computing Facility (\$41.2 million), Arrillaga Outdoor Education and Recreation Center (\$35.5 million), Comparative Medicine Pavilion (formerly Satellite RAF) (\$26.5 million), Arrillaga Family Sports Center Addition (\$17 million), and Stanford Auxiliary Library III Phase 2 (\$14.8 million). The Durand Renovation - Phase 4 (\$6.8 million) project has been reactivated and is included in this Capital Plan.

### Forecasted Projects

Forecasted Projects are those anticipated to receive Board of Trustees approval over the next three years. These projects total \$1.1 billion (43% of the plan) and are listed on page 80. As with the projects in Design and Construction described above, these projects are contingent upon funding. For this group of projects, a total of \$308.5 million (28%) remains to be fundraised and \$246.6 million (22%) in funds have yet to be identified.

Project costs within this category have increased by \$256.1 million from 2012/13, as a number of new and reactivated projects have been added to the Capital Plan. The new and reactivated projects include the Stanford Institute for Chemical Biology/Neurosciences building (\$196.9 million), Encina Renovation (\$67.2 million), Roble Field Parking Structure (\$40.9 million), 408 Panama Mall office building (\$35.4 million), 1651 Page Mill Road Tenant Improvements (\$23.8 million), Public Safety building (\$17 million), Meyer Library Demolition (\$6.7 million), and Stanford House in Oxford (\$4 million).

### Infrastructure

Stanford's ongoing efforts to renew its infrastructure are reflected in a budget of \$249.4 million (10% of the plan) and are listed on page 81. Infrastructure costs have decreased from last year's Capital Plan by \$12.9 million. Infrastructure programs include the Investment in Plant Program (Planned Maintenance), R&DE's Capital Plan Projects (formerly CIP Program), Capital Utilities Program (CUP), Stanford Infrastructure Program (SIP), Information Technology & Communications Systems, Whole Building Energy Retrofit Program Group 2, General Use Permit (GUP) Mitigation Program, and Storm Drain projects. GUP mitigation and SIP projects are funded through construction project surcharges. The other categories of projects are funded by central funds or debt.

#### Investment in Plant - Planned Maintenance Program

Annual Investment in Plant assets represents the maintenance funds planned to be invested to preserve and optimize Stanford's existing facilities and infrastructure (e.g., pathways, outdoor structures, and grounds). These projections are based on the life cycle planning methodology, the key concept being that life expectancies of facility subsystems are known and, as a result, maintenance schedules can be predicted. The three-year estimated program cost is \$149.5 million.

#### R&DE Capital Plan Projects

R&DE's CPP initiative is intended to address health and safety issues, seismic upgrades, code compliance, energy conservation and sustainability measures, and major programmatic improvements in the student housing and dining physical plant. CPP projects anticipated over the next three years total \$41.9 million. CPP includes continuation of the code compliance upgrades of various Row Houses, repairs to the Escondido Village slab heating system and infrastructure, as well as bathroom and kitchen renovations and the remaining projects of the Deferred Maintenance Backlog Reduction (Phase 1 and 2) program. Completed CPP projects will be maintained through the Stanford Housing Asset Renewal Program (SHARP), the Dining Asset Renewal Program (DARP), and Hospitality Asset Renewal Program (HARP).

#### Capital Utilities Program

The \$24.4 million three-year plan improves electrical, steam, water, chilled water, and wastewater utility

systems. The annual CUP program covers the areas of system expansion (\$15.2 million) and system replacement, (\$9.2 million), expanding systems as required by campus growth and replacing systems that are near the end of their useful life.

### Stanford Infrastructure Program

SIP consists of campus and transportation projects and programs for the improvement and general support of the university's academic community, hospitals, and physical plant. SIP expenditures are expected to total \$13.3 million over the next three years (excluding SIP funding for replacement parking spaces). SIP projects include campus transit improvements, parking lot infrastructure improvements, site improvements, landscape design and enhancements, bicycle, cart and pedestrian paths construction, and various lighting, signage, and outdoor art installation.

### Information Technology and Communications Systems

The university's computing and communications systems provide comprehensive data, voice, and video services to the campus community. Over time, these systems must be

improved and/or replaced so that a consistently high level of service can be maintained. Additionally, new technologies are implemented that provide more efficient, faster, and/or more cost-effective solutions. This program totals \$11.5 million for upgrades to these critical university systems, and includes \$2.8 million for a network backbone refresh that is required every five years and \$850,000 for enhanced IT network connections from campus to university buildings at Porter Drive.

### Whole Building Energy Retrofit Program Group 2

This retrofit program seeks to reduce energy consumption in Stanford's largest energy-intensive buildings. The program began in 2003/04 with studies of the top 12 energy-consuming buildings, representing \$15.9 million of energy expenses per year, or nearly 36% of the total campus energy expense. It has since been expanded to offer cost-effective, capital-intensive energy retrofit opportunities to additional large energy-consuming buildings. The retrofits completed thus far have delivered annual energy cost savings of \$3.3 million, a discounted payback of about 4 years, and Pacific Gas and Electric rebates of \$2 million.

## WHOLE BUILDING ENERGY RETROFIT PROGRAM

PROJECT	RETROFIT STATUS	ESTIMATED ANNUAL CONSUMPTION SAVINGS	EARLY RESULTS
Stauffer I - Chemistry	Complete	38%	46%
Gordon & Betty Moore Materials Research <sup>1</sup>	Complete	32%	10%
Paul Allen Center for Integrated Systems (CIS)	Complete	15%	14%
Forsythe (George) Hall	Complete	8%	8%
Stauffer II - Physical Chemistry	Complete	38%	43%
Gates Computer Science	Complete	29%	27%
Beckman Center for Molecular and Genetic Medicine	Complete	46%	32%
Gilbert Biological Sciences	Complete	35%	32%
Cantor Center for Visual Arts	Complete	13%	14%
Bing Wing (Green Library West)	Complete	16%	50%
Packard Electrical Engineering	Complete	26%	
Mitchell Earth Sciences	Design	50%	
Green Earth Sciences	Design	15%	
Clark Center	Design	26%	
Arrillaga Alumni Center	Design	27%	
Varian Physics Laboratory	Study		
Mechanical Engineering Laboratory	Study		
Lucas Center	Delayed to 2014/15		
Center for Clinical Sciences Research (CCSR)	Delayed to 2016/17		
Herrin Hall - Biology <sup>2</sup>	Cancelled		

<sup>1</sup> Construction scope reduced from original survey.

<sup>2</sup> Planned for demolition.

The table on the previous page summarizes the status of these projects, expected annual savings, and actual savings achieved. Each project goes through a one-year tuning and monitoring period following completion of construction to ensure the building is performing to design expectations, followed by ongoing monitoring. As such, early results may not be indicative of expected long-term improvements due to the time needed for the changes to take full effect.

### **General Use Permit Mitigation**

Funding for GUP mitigations is generated by an internal fee levied on capital projects that increase school/department campus space allocations. The fee provides funding necessary for implementation of Santa Clara County GUP requirements and recommendations including trails, storm water management, transportation demand management, protection of biological resources, and other programs. Also included are projects related to water conservation, water allocation (i.e., alternative supplies), and wastewater collection expansion, whose three-year estimated cost is \$1.7 million. Additionally, GUP fees fund new parking spaces.

### **Storm Drains**

The ongoing storm drainage program includes projects for improving and expanding the capacity of the campus storm drainage system, replacing deteriorated pipes, and improving drainage around buildings. In addition, stringent storm water quality regulations are necessitating new storm water treatment approaches such as bioswales, bioretention, and storm water capture to minimize contamination conveyed to natural water bodies from common storms. These treatment approaches will be incorporated on new building sites, where feasible. This program covers campus-wide storm water treatment facilities that meet these requirements beyond those met by new building projects. The three-year estimated program cost is \$1.5 million.

### **Other Stanford Entities**

In an effort to present a comprehensive view of university planned construction, the capital planning process has included real estate investments, Stanford Hospital and Clinics (SHC), Lucile Packard Children's Hospital (LPCH), and SLAC National Accelerator Laboratory. Although the Capital Plan tables at the end of this chapter do not include these entities, brief descriptions of their capital programs follow. The SLAC capital programs are addressed in Chapter 2, page 50.

### **Real Estate Investments**

Real Estate is managing three major investment projects totaling \$186 million in various stages of development on Stanford lands. Two new commercial offices of 194,000 square feet will be developed in the Research Park at a cost of \$110.9 million, replacing 135,000 square feet of functionally obsolete buildings. In addition to the 180 units faculty staff housing in the Capital Plan, 220 new housing units will be built, 70 of which will be below market-rate units developed in Palo Alto as part of the Mayfield Development Agreement, with the remaining 150 units planned to be developed as a multifamily apartment project in Menlo Park and rented to the open market. The 142,000 square foot market-rate apartment project is budgeted at \$75 million. Once rents from all projects are stabilized, \$16 million of additional annual gross revenue is expected to be generated.

### **Stanford Hospital and Clinics and Lucile Packard Children's Hospital**

Since receiving development entitlements for the Stanford University Medical Center (SUMC) Renewal Project in July 2011, construction activity has begun on the SUMC sites, and significant project milestones have been reached. The renovation of the historic Hoover Pavilion was completed in December 2012, housing a number of patient services as well as the practices of several community physicians. On the main SUMC campus, site clearing activity to make way for the New Stanford Hospital is in progress, and mass excavation is under way for the Lucile Packard Children's Hospital Expansion. Utility upgrades to serve the new medical facilities are currently in progress along Welch and Quarry Roads, and are expected to complete in fall 2013. The estimated project costs of SHC and LPCH are \$2 billion and \$1.1 billion, respectively.

### **Overall Summary**

A summary table of the 2013/14–2015/16 three-year Capital Plan appears on page 76. Included are projects and programs in Design and Construction, Forecasted, and Infrastructure categories that are currently active or are anticipated to commence in the next three years.

To differentiate between the estimated costs of the three-year Capital Plan and the forecasted spending to complete its projects and programs, an additional table (Capital Plan Cash Flows) is included along with the Capital Plan Summary. This table forecasts the expenditure outflow of

the Capital Plan based on project and program schedules. These cash expenditures are anticipated to be spent over a period extending beyond 2015/16.

Operating (including utilities), maintenance, and debt service costs will impact the university's operating budget once the construction is substantially complete. Although the Capital Plan Summary shows the full budget impact of all completed projects, it is important to note that this impact aligns with the project completion schedule and will be absorbed by the university budget over a period beyond the three-year plan based on actual project completion dates. A table entitled Capital Plan Impact on Budget is included with the Capital Plan Summary and Capital Plan Cash Flows table to forecast the budget impact by area of responsibility (e.g., general funds, formula schools, etc.).

The tables at the end of this chapter provide a detailed list of the projects included in the Capital Plan. The accompanying text summarizes these projects in order to present a comprehensive view of all major planned construction on Stanford lands.

The following sections address the Capital Plan funding sources and uses, along with resource constraints.

### Capital Plan Funding Sources

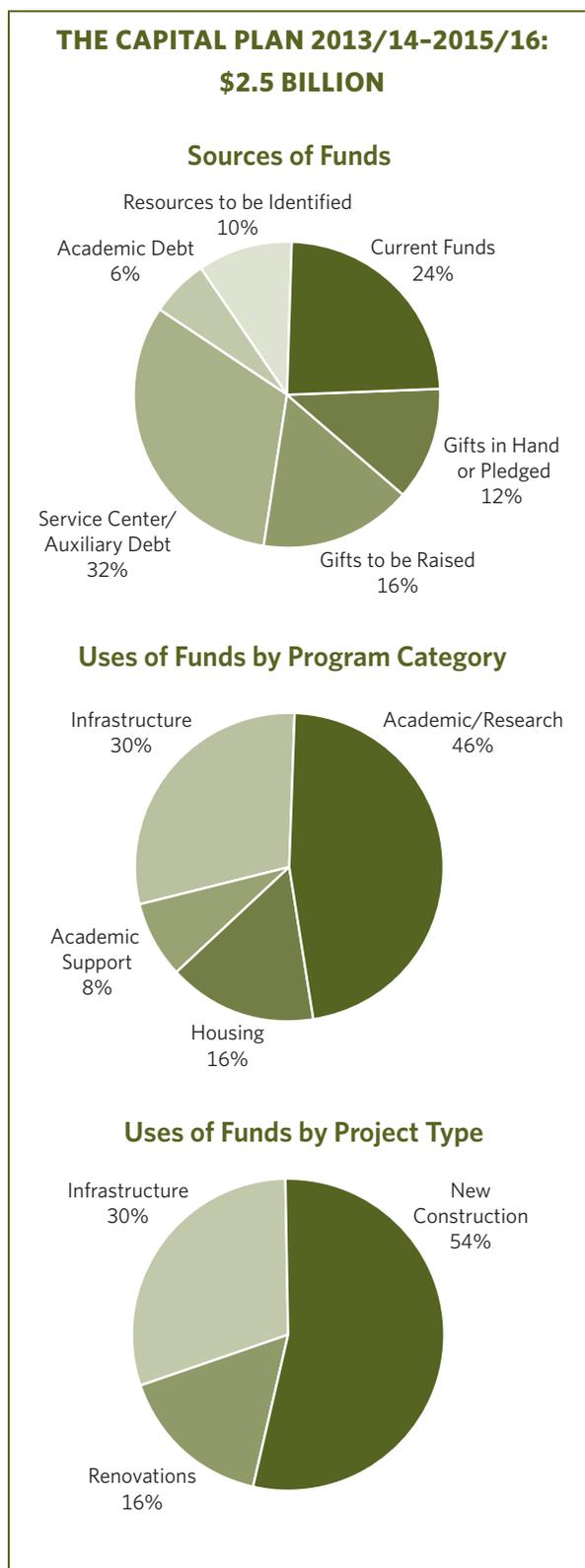
As the chart shows, Stanford's Capital Plan relies on several funding sources including Current Funds, Gifts, and Debt. Depending upon fundraising realities and time frames, some projects will prove more difficult than others to undertake. As a result, it is possible that projects in the Capital Plan will have to be cancelled, delayed, or scaled back in scope.

For any projects relying on Gifts to be Raised, the Office of Development has determined that fundraising plans are feasible, although the time frames for the receipt of gifts are subject to change. Resources to be identified includes funds yet to be fully identified, with the expectation that funds will come from a combination of school, department, and university reserves, and other sources.

### Uses of Funds by Program Category and Project Type

The middle chart divides the Capital Plan activity into program categories — Academic/Research, Infrastructure, Housing, and Academic Support — with the largest categories being Academic/Research and Infrastructure at 46% and 30% of the Capital Plan, respectively. The last

chart breaks out the same activity into project types — New Construction, Infrastructure, and Renovations — with them comprising 54%, 30%, and 16% of the plan, respectively.



## SUMMARY OF THREE-YEAR CAPITAL PLAN 2013/14-2015/16

[IN MILLIONS OF DOLLARS]

	ESTIMATED PROJECT COST	CAPITAL BUDGET 2013/14	PROJECT FUNDING SOURCE						ANNUAL CONTINUING COSTS	
			CURRENT FUNDS <sup>1</sup>	GIFTS		UNIVERSITY DEBT		RESOURCES TO BE IDENTIFIED <sup>2</sup>	DEBT SERVICE	OPERATIONS & MAINTENANCE <sup>3</sup>
				IN HAND OR PLEDGED	TO BE RAISED	SERVICE CENTER/AUXILIARY DEBT	ACADEMIC DEBT			
Projects in Design & Construction	1,200.9	469.5	191.2	183.7	101.1	672.0	52.9		39.4	25.0
Forecasted Projects	1,096.4	85.7	259.2	126.2	308.5	74.9	81.0	246.6	9.6	3.6
<b>Total Construction Plan</b>	<b>2,297.3</b>	<b>555.2</b>	<b>450.4</b>	<b>309.9</b>	<b>409.6</b>	<b>746.9</b>	<b>133.9</b>	<b>246.6</b>	<b>49.0</b>	<b>28.6</b>
Infrastructure Programs	249.4	103.5	164.5			69.3	15.6		5.9	0.5
<b>Total Three-Year Capital Plan 2013/14-2015/16</b>	<b>2,546.7</b>	<b>658.7</b>	<b>614.9</b>	<b>309.9</b>	<b>409.6</b>	<b>816.2</b>	<b>149.5</b>	<b>246.6</b>	<b>54.9</b>	<b>29.1</b>

<sup>1</sup> Includes funds from university and school reserves and the GUP and SIP programs. Also includes the \$20 million Hoover subvention for the McMurtry Building.

<sup>2</sup> Anticipated funding for this category is through a combination of school, department, university reserves, and other sources.

<sup>3</sup> Operations & Maintenance includes planned and reactive/preventative maintenance, zone management, utilities, contracts, grounds, and outdoor lighting.

## CAPITAL PLAN CASH FLOWS

[IN MILLIONS OF DOLLARS]

	2012/13 & PRIOR	2013/14	2014/15	2015/16	2016/17 & THEREAFTER	TOTAL
Projects in Design & Construction	437.4	469.5	198.7	64.9	30.4	1,200.9
Forecasted Projects	15.7	85.7	219.7	260.3	515.0	1,096.4
<b>Total Construction Plan</b>	<b>453.1</b>	<b>555.2</b>	<b>418.4</b>	<b>325.2</b>	<b>545.4</b>	<b>2,297.3</b>
Infrastructure Programs		103.5	64.8	81.2		249.4
<b>Total Three-Year Capital Plan 2013/14-2015/16</b>	<b>453.1</b>	<b>658.7</b>	<b>483.1</b>	<b>406.4</b>	<b>545.4</b>	<b>2,546.7</b>

## CAPITAL PLAN IMPACT ON BUDGET

[IN MILLIONS OF DOLLARS]

	2014/15	2015/16	2016/17 & THEREAFTER	TOTAL
<b>Debt Service</b>				
General Funds	2.6	13.0	1.6	17.2
Formula and Other Schools	0.1	9.9	2.6	12.6
Auxiliary	6.5	5.5	5.6	17.6
Other <sup>1</sup>	0.1	7.3	0.2	7.6
<b>Incremental Internal Debt Service</b>	<b>9.3</b>	<b>35.7</b>	<b>9.9</b>	<b>54.9</b>
<b>Operations and Maintenance</b>				
General Funds	4.6	8.1	1.7	14.3
Formula and Other Schools	2.1	3.6	2.0	7.7
Auxiliary	0.7	0.9	2.2	3.8
Other <sup>1</sup>		3.1	0.1	3.2
<b>Incremental Operations and Maintenance</b>	<b>7.4</b>	<b>15.7</b>	<b>6.0</b>	<b>29.1</b>

<sup>1</sup> Primarily the hospitals along with Forsythe facility, Faculty Staff Housing, and outside entities.

## Capital Plan Constraints

### Affordability

The incremental internal debt service expected at the completion of all projects commencing in the three-year plan period (completion dates range from 2013/14 to 2017/18) totals \$54.9 million annually (excluding debt service for bridge financing the receipt of gifts and operating lease payments). Of this amount, \$17.2 million will be serviced by general funds, \$12.6 million directly by formula schools (the GSB and SoM), and \$25.1 million by auxiliary and other operations. Service center debt is funded through rates paid by customers and has been allocated and included in the totals for general funds, formula schools, auxiliary, and other operations.

The additional O&M costs expected at the completion of all projects commencing in the three-year period total \$29.1 million per year. Of this amount, \$14.3 million will be serviced by general funds, \$7.7 million by the formula schools, and \$7.1 million by auxiliary and other operations. O&M and debt service on capital projects compete directly with other academic program initiatives.

### Debt Capacity

As of May 15, 2013, debt available to finance capital projects and faculty mortgages is estimated at \$953 million, including \$351 million of taxable commercial paper, \$207 million of tax-exempt commercial paper, \$341 million of unexpended tax-exempt bond proceeds, and \$54 million of unexpended taxable bond proceeds. By the end of June 2013, \$99 million of the unexpended tax-exempt bond proceeds will be used to finance projects on taxable commercial paper. In addition, through year-end 2012/13 and 2013/14, \$122 million internal amortization proceeds on debt-funded projects will become available to lend to projects, and \$116 million in forecasted pledge payments will retire debt issued to bridge finance the receipt of gifts.

The Capital Plan will require a total of \$1,098 million of debt:

- \$688 million to complete projects already approved or under construction;
- \$260 million for projects forecast to be approved in 2013/14; and
- \$151 million to bridge finance the receipt of gift pledges for projects under construction.

Additional debt may be required to finance the Faculty Staff Housing program. As of May 1, 2013, the portfolio of debt-subsidized mortgages had decreased by \$17.1 million to \$372 million.

Projects identified in the three-year Capital Plan commencing after 2014/15 will require an additional \$172 million in debt. Debt for these projects has not been committed and allocations will be evaluated in the context of debt capacity, affordability, viability of the funding plan, and GUP limitations.

### Entitlements

The Stanford campus encompasses 8,180 acres, which fall within six jurisdictions. Of this total, 4,017 acres, including most of the central campus, are within unincorporated Santa Clara County.

In December 2000, Santa Clara County approved a General Use Permit (GUP) that allows Stanford to construct up to 2,035,000 additional gross square feet of academic-related buildings on the core campus. The GUP also allows the construction of up to 2,000 new student housing units and over 1,000 units of housing for postdoctoral fellows, medical residents, faculty, and staff, though Stanford is currently working with Santa Clara County to amend the GUP housing provisions to allow more student units.

Conditions of approval included the following:

- Creation of an academic growth boundary to limit the buildable area to the core campus for a minimum of 25 years;
- Approval of a sustainable development study (SDS) before new construction is developed beyond one million gross square feet. (The SDS was approved by Santa Clara County in April 2009.); and
- Construction of 605 units of housing for each 500,000 gross square feet of new academic building.

Given the stringent requirements imposed by the GUP and the increasingly difficult entitlement environment, Stanford carefully manages the allocation of new growth. The total GUP square footage allocation was originally projected to be expended over 15 years at an average rate of approximately 135,000 gsf per year. Subsequent experience has lengthened this projection. This year's Capital Plan utilizes net 312,486 of GUP square feet, after demolitions. This square

footage, along with gross square feet previously allocated, brings the total GUP 2000 gsf expended or planned to over one million.

With the amended GUP housing provisions and the completion of planned housing projects, including Comstock Graduate Housing, GSB Housing Expansion, and Lagunita and Manzanita Undergraduate Housing, Stanford will have added 2,361 net new housing linkage units since approval of the GUP. The completion of these units will enable the university to construct nearly 2 million gsf of new academic and academic support space under the GUP.

## **CAPITAL PLAN PROJECT DETAIL**

The tables on the following three pages show projects grouped within three categories: Projects in Design and Construction, Forecasted Construction Projects, and Infrastructure Projects and Programs.

## 2013/14-2015/16 CAPITAL PLAN PROJECTS IN DESIGN & CONSTRUCTION

[IN MILLIONS OF DOLLARS]

	SCHOOL/ DEPARTMENT	FISCAL YEAR PROJECT SCHEDULE	ESTIMATED PROJECT COST	CAPITAL BUDGET 2013/14	CURRENT FUNDS <sup>1</sup>	PROJECT FUNDING SOURCE				ANNUAL CONTINUING COSTS		
						GIFTS		UNIVERSITY/DEBT		DEBT SERVICE	OPERATIONS & MAINTENANCE <sup>2</sup>	
						IN HAND OR PLEGGED	TO BE RAISED	SERVICE CENTER/ AUXILIARY DEBT	ACADEMIC DEBT			RESOURCES TO BE IDENTIFIED <sup>2</sup>
Stanford Energy System Innovations (SESI)												
Replacement Central Energy Facility	LBRE	2012-15	230.0	116.6				230.0			15.9	12.0
Piping, Building Conversions, and Process Steam Plant <sup>4</sup>	LBRE	2012-15	165.7	69.9				165.7			10.6	
New Electrical Substation	LBRE	2012-15	42.3	21.4				42.3			3.2	
Bioengineering/Chemical Engineering												
Base Building	SOE/SOM	2005-14	187.8	26.8	5.0	112.9	40.1		29.8		1.8	5.8
Connective Elements	SOE/SOM	2005-14	8.8	1.2		8.8						
Future Fit-up	SOE/SOM	2005-18	18.9	2.4			18.9					
Mayfield California Avenue Faculty Staff Housing (180 units)	LBRE	2013-18	128.0	12.8				128.0				
Comstock Graduate Housing (362 net new beds)	R&DE	2012-14	110.0	63.6	20.0			90.0			5.3	0.7
McMurtry Building	H&S	2012-15	87.0	31.2	37.0	37.2	12.8					2.3
Building 08-350 Renovation for SUL North	SUL	2012-14	57.0	33.0	57.0							2.1
Anderson Collection at Stanford University	PRES/PROV	2012-14	36.0	16.7	18.2	4.1	13.7					0.9
C.J. Huang Building	SOM	2012-14	23.2	13.4	2.3	11.5	9.4					0.4
RAF 1 and RAF 2 Rehabilitation and Retrofit	SOM	2013-15	20.6	16.6	5.6				15.0		1.1	
Buildings 02-520 and 02-524 Renovation	SOE	2013-15	20.5	7.9	20.5							
Manzanita Undergraduate Housing (128 new beds)	R&DE	2010-15	20.0	8.3	4.0			16.0			1.0	
Crown Quadrangle Renovation	SLS	2012-14	15.0	10.6	5.0	5.0	5.0					
Northwest Data Center and Communications Hub	ITS/AS	2013-15	14.9	11.3	6.8				8.1		0.5	0.7
Durand Renovation - Phase 4	SOE	2007-16	6.8	0.6	6.8							
Windhover Contemplative Center	VPSA	2012-14	5.4	3.7		4.2	1.2					0.1
Crothers Hall/Crothers College Dean's Residence	R&DE	2013-14	3.0	1.4	3.0							
<b>Subtotal - Projects in Design &amp; Construction</b>			<b>1,200.9</b>	<b>469.5</b>	<b>191.2</b>	<b>183.7</b>	<b>101.1</b>	<b>672.0</b>	<b>52.9</b>	<b>39.4</b>	<b>25.0</b>	

<sup>1</sup> Includes funds from university and school reserves and the GUP and SIP programs. Also includes the \$20 million Hoover subvention for the McMurtry Building.

<sup>2</sup> Anticipated funding for this category is through a combination of school, department, university reserves, and other sources.

<sup>3</sup> Operations & Maintenance includes planned and reactive/preventive maintenance, zone management, utilities, contracts, grounds, and outdoor lighting.

<sup>4</sup> Current status of Piping, Building Conversions, and Process Steam Plant budget is \$40 million more than the \$165.7 million. Revised budget will be completed in fall 2013 after additional engineering and contract negotiations are finalized.

**2013/14-2015/16 CAPITAL PLAN  
FORECASTED CONSTRUCTION PROJECTS**

[IN MILLIONS OF DOLLARS]

	SCHOOL/ DEPARTMENT	FISCAL YEAR PROJECT SCHEDULE	ESTIMATED PROJECT COST	CAPITAL BUDGET 2013/14	CURRENT FUNDS <sup>1</sup>	PROJECT FUNDING SOURCE					ANNUAL CONTINUING COSTS	
						GIFTS		UNIVERSITY/DEBT		RESOURCES TO BE IDENTIFIED <sup>2</sup>	DBET SERVICE	OPERATIONS & MAINTENANCE <sup>3</sup>
						IN HAND OR PLEGGED	TO BE RAISED	SERVICE CENTER/ AUXILIARY DEBT	ACADEMIC DEBT			
Bio Medical Innovation Building 1 (BMI 1) (formerly FIM 1) Building	SOM	2015-18	251.4	2.5	25.1		208.7		17.6		1.1	1.1
Tunnel Infrastructure	SOM	2015-18	15.0	0.2	13.5				1.5		0.1	
Stanford Institute for Chemical Biology/Neurosciences Building	DOR	2016-18	196.9							196.9		
Biology Research and Teaching	H&S	2014-16	96.1	7.7	28.6	48.9	7.9		10.7		0.7	3.2
Teaching Labs & Learning Center (Old Chem)	H&S	2013-16	66.7	6.6	28.9	26.5	7.0		4.3		0.3	1.8
Connective Elements	H&S	2013-16	4.5	0.4		4.5						
Demolitions (Herrin Lab/Herrin Hall/Mudd/Org Chem)	H&S	2016-17	12.0	0.7	7.2	4.8						(6.1)
Encina Renovation (International Initiative)	DOR	2015-17	67.2	0.7		7.5	22.5			37.2	1.6	2.1
GSB Housing Expansion (150 new beds)	GSB	2014-17	66.7	3.0	20.0		20.0		26.7			
Hoover Office Building	HOOVER	2014-17	45.6	1.3		3.2	42.4					0.9
New Building	HOOVER	2015	1.7		1.7							(1.0)
Demolition of Cummings Art	LBRE	2013-16	40.9	10.4	40.9							1.1
Roble Field Parking Structure (1000 spaces)	R&DE	2014-17	38.8	5.0				38.8			2.4	
Governor's Corner Renovation - Phases 1-4	PRES/PROV	2013-15	35.4	17.2	11.0	24.4					1.8	0.2
408 Panama Mall Office Building	R&DE	2013-15	35.0	12.2	4.0			31.0				0.7
Lagunita Undergraduate Housing (200 new beds)	H&S	2014-16	28.0	2.0	28.0							0.4
Roble Gym Renovation	SOM	2014-16	23.8	1.1	23.8							(2.6)
1651 Page Mill Road Tenant Improvements	SOM	2013-18	23.6	2.1	7.6				16.0		1.2	0.8
Stone Complex Seismic Bracing Projects <sup>4</sup>	PRES/PROV	2014-16	17.0	1.0	4.5					12.5		
Public Safety Building	GSE	2016-18	8.6		2.2	6.4						
School of Education Building Seismic Renovation Phase 2	PRES/PROV	2014	6.7	6.7	6.7							
Meyer Library Demolition	ITS/AS	2013-15	5.6	2.5	1.4				4.2		0.3	
Forsythe Data Center Phase 4 Power and Cooling Upgrade	LBRE	2014-16	5.2	0.4	0.1			5.1			0.3	0.8
High Voltage Intertie	VPUe	2013-15	4.0	3.0	4.0							
Stanford House in Oxford												
<b>Subtotal - Forecasted Projects</b>			<b>1,096.4</b>	<b>85.7</b>	<b>259.2</b>	<b>126.2</b>	<b>308.5</b>	<b>74.9</b>	<b>81.0</b>	<b>246.6</b>	<b>9.6</b>	<b>3.6</b>
<b>SUBTOTAL - CONSTRUCTION PLAN</b>			<b>2,297.3</b>	<b>555.2</b>	<b>450.4</b>	<b>309.9</b>	<b>409.6</b>	<b>746.9</b>	<b>133.9</b>	<b>246.6</b>	<b>49.0</b>	<b>28.6</b>

<sup>1</sup> Includes funds from university and school reserves and the GUP and SIP programs.

<sup>2</sup> Anticipated funding for this category is through a combination of school, department, university reserves, and other sources.

<sup>3</sup> Operations & Maintenance includes planned and reactive/preventative maintenance, zone management, utilities, contracts, grounds, and outdoor lighting.

<sup>4</sup> Excludes the Boswell portion of the project which will be funded by SHC.

## 2013/14-2015/16 CAPITAL PLAN INFRASTRUCTURE PROGRAMS

[IN MILLIONS OF DOLLARS]

	SCHOOL/ DEPARTMENT	FISCAL YEAR PROJECT SCHEDULE	ESTIMATED PROJECT COST	CAPITAL BUDGET 2013/14	CURRENT FUNDS <sup>1</sup>	PROJECT FUNDING SOURCE				ANNUAL CONTINUING COSTS				
						GIFTS	UNIVERSITY DEBT	RESOURCES TO BE IDENTIFIED <sup>2</sup>	DEBT SERVICE	OPERATIONS & MAINTENANCE <sup>3</sup>	IN HAND OR PLEDGED	TO BE RAISED	SERVICE CENTER/ AUXILIARY DEBT	ACADEMIC DEBT
Investment in Plant (Planned Maintenance)														
	LBRE	2014-16	56.6	22.8	56.6									
	SOM	2014-16	43.6	26.7	43.6									
	R&DE	2014-16	40.1	11.6	40.1									
	DAPER	2014-16	9.2	5.3	9.2									
	LBRE	2014-16												
	LBRE	2014-16												
			<b>149.5</b>	<b>66.4</b>	<b>149.5</b>									
<b>Subtotal-Investment in Plant (Planned Maintenance)</b>														
	R&DE	2014-16	41.9	14.1				41.9				3.2		
Capital Utilities Program (CUP)														
	LBRE	2014-16	15.2	5.5				15.2				0.9		
	LBRE	2014-16	9.2	3.8				9.2				0.6		
			<b>24.4</b>	<b>9.3</b>				<b>24.4</b>				<b>1.5</b>		
<b>Subtotal-CUP</b>														
Stanford Infrastructure Program (SIP)														
	LBRE	2014-16	13.3	4.3										
	ITS	2014-16	11.5	4.2				3.0		8.5		0.5		
	Various	2014-15	5.6	4.2						5.6		0.4		
	LBRE	2014-16	1.7	0.5										
	LBRE	2014-16	1.5	0.5						1.5		0.1		
			<b>249.4</b>	<b>103.5</b>	<b>164.5</b>			<b>69.3</b>		<b>15.6</b>		<b>5.9</b>		
<b>Subtotal - Infrastructure Projects &amp; Programs</b>														
<b>Total Capital Plan</b>														
			<b>2,546.7</b>	<b>658.7</b>	<b>614.9</b>	<b>309.9</b>	<b>409.6</b>	<b>816.2</b>	<b>149.5</b>	<b>246.6</b>	<b>54.9</b>	<b>29.1</b>		

<sup>1</sup> Includes funds from university and school reserves and the GUP and SIP programs.

<sup>2</sup> Anticipated funding for this category is through a combination of school, department, university reserves, and other sources.

<sup>3</sup> Operations & Maintenance includes planned and reactive/preventive maintenance, zone management, utilities, contracts, grounds, and outdoor lighting.

<sup>4</sup> R&DE Capital Plan Projects generally includes program and code upgrades vs. Planned Maintenance which includes subsystem replacement.

<sup>5</sup> Included under CUP - System Replacement below.

